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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,615	03/26/2001	Khoi A. Phan	F0658	6873
7590	07/12/2005		EXAMINER	
Himanshu S. Amin Amin & Turocy, LLP National City Center, 24th Floor 1900 East Ninth Street Cleveland, OH 44114			FRANKLIN, JAMARA ALZAIDA	
			ART UNIT	PAPER NUMBER
			2876	
DATE MAILED: 07/12/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/817,615

Applicant(s)

PHAN ET AL.

Examiner

Jamara A. Franklin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-31 is/are allowed.
- 6) ☒ Claim(s) 1-27 and 32-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

Acknowledgment is made of the amendment filed on 5/09/05. Claims 1-36 are currently pending.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 14, 15, 32-34, and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Davis (US 6,061,605).

Davis teaches a system and method for performing inventory control comprising:

one or more inventories (cassette 19) adapted to store at least one of wafers (wafer 18), unpackaged circuits and packaged circuits, where the wafers are suitable for processing into integrated circuits and where at least one of the wafers, the unpackaged circuits and the packaged circuits are marked with one or more barcodes (col. 8, lines 5-9);

the inventories wherein at least one of the one or more inventories is partitioned into one or more addressable locations (see figure 1);

one or more barcode readers operable to read one or more barcodes on the wafers, unpackaged circuits and packaged circuits (col. 8, lines 27-29);

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one or more manufacturing devices (treatment modules including heating module 70 and cooling module 72) adapted to perform one or more manufacturing processes on the wafers, unpackaged circuits and packaged circuits (col. 9, lines 4-31);

one or more sorters (robot controller 58) adapted to route at least one of wafers, unpackaged circuits and packaged circuits to at least one of the one or more inventories and the one or more manufacturing devices based, at least in part, on information encoded by the one or more barcodes (col. 8, lines 61-67);

one or more transporters (robot 50) adapted to move one or more wafers, unpackaged circuits and packaged circuits between the one or more inventories, the one or more barcode readers and the one or more sorters (col. 8, lines 61-67);

one or more feedback systems (support equipment manager server 136) adapted to receive feedback information from at least one of the one or more barcode readers, the one or more sorters and the one or more manufacturing devices, the one or more feedback systems adapted to generate control information that is fed forward to at least one of the one or more barcode readers, the one or more sorters and the one or more manufacturing devices (col. 8, lines 42-52);

one or more Electronic Data Interchange (EDI) systems (host controller 20) adapted to transmit one or more EDI data to one or more EDI data destinations, the one or more EDI data being generated by at least one of the one or more barcode readers, the one or more inventories, the one or more sorters, the one or more manufacturing devices and the one or more feedback systems (col. 7, line 58-col. 8, line 4);

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the method wherein the wafer is suitable for processing into integrated circuits (col. 1, line 64-col. 2, line 9);

identifying a wafer store from which to retrieve a wafer (col. 8, lines 5-9);

identifying a wafer to retrieve from a wafer store (col. 8, lines 52-61);

moving the wafer from the wafer store to a barcode reader (col. 8, lines 5-32);

identifying a wafer store to which to route a wafer (col. 8, lines 27-29);

identifying a wafer to route to the wafer store (col. 8, lines 27-29); and

moving the wafer to the wafer store (col. 8, lines 61-67);

accessing stored data associated with information encoded on a barcode on a wafer (col. 8, lines 22-32); and

controlling one or more behaviors of one or more wafer destinations based at least in part on accessing the stored data (col. 8, lines 42-48);

the method wherein the stored data includes at least one of wafer age, wafer location, wafer manufacturer, stage of wafer processing completed, next stage of wafer processing to be performed and wafer defects (col. 8, lines 11-21); and

a data packet adapted to be transmitted between two or more computer processes, the data packet containing information or feedback information related to inventory control and routing data encoded in one or more barcodes on a wafer, the wafer suitable for processing into integrated circuits (col. 8, line 5-col. 9, line 9).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-13, 16-27, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis in view of Kudo (US 6,896,186).

The teachings of Davis have been discussed above.

Davis lacks the teaching of at least one barcode coupled to the integrated circuit and the teaching of the barcode being formatted according to at least one of a plurality of barcode formats.

Kudo teaches a system for performing inventory control comprising:

one or more barcode readers operable to read two or more barcodes, at least one of the two or more barcodes coupled to the integrated circuits and encodes information sufficient to

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identify the wafers on which the integrated circuits were fabricated by relating the barcode coupled to the integrated circuit to at least one wafer and wafer information (col. 9, line 65-col. 10, line 11 and col. 11, lines 48-56); and

the system wherein a barcodes are formatted according to at least one of, three of nine format, code ninety three format, interleaved code two or five format, code one twenty eight format, Colorado barcode format, and two-dimensional format (see figure 1)

One of ordinary skill in the art would have readily recognized that providing the Davis invention with a integrated circuit having a barcode would have been beneficial for making the entire inventory system more uniform since any identifying steps could then be done using the same identifying devices (i.e. barcode scanners), thereby cutting back on system manufacturing costs. Furthermore, one of ordinary skill in the art would readily recognized that providing the Davis invention with a two-dimensional barcode would have been beneficial for allowing the Davis wafer to store thereupon a greater amount of information in relation to the wafer itself since the two-dimensional barcode has greater storage capabilities. Therefore, it would have been obvious, at the time the invention was made, to modify the teachings of Davis with the aforementioned teaching of Kudo.

***Allowable Subject Matter***

6. Claims 28-31 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter: although the prior art of record, particularly the Davis invention, teach identifying a wafer using

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a bar code, the prior art lacks the teaching of a method of tracking integrated circuits comprising: marking a packaged integrated circuit fabricated from the wafer with one or more third barcodes, the third barcodes encoding information sufficient to identify the wafer from which the packaged integrated circuit was fabricated by relating the third barcodes to at least one of the first barcode, the wafer information stored in the data store, the one or more second barcodes and packaging information related to the packaging of the integrated circuit.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 1-13, 16-27, and 35 have been considered but are moot in view of the new ground(s) of rejection. In view of the newly found Kudo reference, the examiner submits that the limitation previously indicated as having allowable subject matter in paper no. 205, is no longer allowable. Any inconvenience on the part of the applicant is greatly regretted.

9. Some other applicant's arguments filed 5/09/05 have been fully considered but they are not persuasive.

In response to the argument Davis fails to teach limitations found in claims 14 and 36 that cite one or more feedback systems adapted to receive feedback information from at least one of the one or more barcode readers, the one or more sorters and the one or more manufacturing devices, the one or more feedback systems adapted to generate control information that is fed forward to at least one of the one or more barcode readers, the one or more sorters and the one or more manufacturing devices, the examiner submits that the aforementioned limitation is not



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distinctly claimed in claim 36. Furthermore, contrary to the argument that nowhere does the document teach the generation of control information based on the processing conditions that have been monitored, the examiner submits that control information is generated by the host controller which sends a signal (i.e. control information) to the robot controller 58 to scan the cassette of wafers (col. 8, lines 49-52).

In response to the argument that nowhere does Davis disclose transmitting production personnel and industrial process information to one or more suppliers of the semiconductor wafers as cited in claim 32, the examiner submits that the Davis does indeed teach the aforementioned limitation since a "supplier" of a wafer may refer to any place or thing from which a wafer is supplied to another place or thing. In this case, the "supplier" of the wafer may be the robot 50 which supplies the wafer to any number of different work stations.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamara A. Franklin whose telephone number is (571) 272-2389. The examiner can normally be reached on Monday through Friday 8:00am to 4:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jamara A. Franklin  
Examiner  
Art Unit 2876

JAF  
June 30, 2005

  
DIANE I. LEE  
PRIMARY EXAMINER